

Amendments to the Specification:

Please replace paragraph 21 on page 3 with the following amended paragraph:

A finger proof, keyed power connector 10(1) in accordance with embodiments of the present invention is illustrated in FIGS. 1-7. The power connector 10(1) includes a housing 12, a pair of connector passages 14(1) and 14(2), a pair of wiping, electrical contacts 16(1) and 16(2), and a pair of interface passages 18(1) and 18(2), and a pair of mating interfaces 19(1) and 19(2), although other numbers and types of components in other configurations can be used. The present invention provides power connectors with a keyed configuration to assure the proper connection of a particular power source to a particular component and also with a safer finger proof design

Please replace paragraph 25 on page 4 with the following amended paragraph:

Referring to FIGS. 1-7, the pair of interface passages 18(1) and 18(2) extend into another end 24(2) of the housing 12, although the housing 12 could have other numbers of interface passages, such as one or three or more interface passages. The connector passage 14(1) connects to the interface passage 18(1) to form a through passage from one end 24(1) to the other end 24(2) of the housing 12, although other arrangements for the passages could be used. Similarly, the connector passage 14(2) connects to the interface passage 18(2) to form another through passage from one end 24(1) to the other end 24(2) of the housing 12, although other arrangements for these passages could be used. The pair of mating interfaces 19(1) and 19(2) are adjacent the interface passages 18(1) and 18(2).

Please replace paragraph 26 on pages 4 and 5 with the following amended paragraph:

Referring to FIG. 7, a genderless, flat wiping, electrical contact 16(1) is located in the interface passage 18(1) and extends into the connector passage 14(1) and another genderless, flat wiping, electrical contact 16(2) is located in the interface passage 18(2) and extends into the connector passage 14(2), although other types of electrical contacts and other configurations can be used. Electrical contact 16(1) is secured to and biased by a spring in interface passage 18(1) to provide the necessary normal force for engaging and coupling to a connector, such as power cable, wire, or lead to a component, which can mate with the interface passage 16(1) 18(1), although other manners for securing a connector in the interface passage 18(1) could be used. Similarly, electrical contact 16(2) is secured to and

biased by a spring in interface passage 18(2) to provide the necessary normal force for engaging and coupling to another connector, such as power cable, wire, or lead to a component, which can mate with the interface passage 16(2) 18(2), although other manners for securing a connector in the mating interface passage 18(2) also could be used. Although genderless, flat wiping, electrical contacts 16(1) and 16(2) are shown, other numbers, types, and arrangements of electrical contacts can be used, such as a male-female contact arrangement

Please replace paragraph 28 on page 5 with the following amended paragraph:

Each of the interface passages 18(1) and 18(2) has a generally square configuration, although the interface passages could have other shapes and configurations for the outer perimeter. The interface passage 18(1) and the mating interface 19(1) has sections 34(1)-34(4) and the interface passage 18(2) and the mating interface 19(2) has sections 36(1)-36(4), although the interface passages passage 18(1) and mating interface 19(1), and interface passage 18(2) and mating interface 19(2) could have other numbers and types of sections.

Please replace paragraph 29 on pages 5 and 6 with the following amended paragraph:

With respect to interface passage 18(1) and mating interface 19(1), the section 34(1) has an indented portion 36(1) adjacent a substantially straight portion 36(2). The section 34(2) has a substantially straight portion 36(3) between substantially straight portion 36(2) and indented portion 36(4). The section 34(3) has a substantially straight portion 36(5) between the indented portion 36(4) and the indented portion 36(6). The section 34(4) has a substantially straight portion 36(7) between the indented portion 36(6) and a protruded portion 36(8).

Please replace paragraph 30 on page 6 with the following amended paragraph:

The interface passage 18(2) with the mating interface 19(2) is a mirror image of the interface passage 18(1) with the mating interface 19(1) with the same number and types of sections and portions as described with reference to interface passage 18(1) and mating interface 19(1), although the interface passages passage 18(1) and mating interface 19(1), and interface passage 18(2) and mating interface 19(1) could have different or identical configurations.

Please replace paragraph 31 on page 6 with the following amended paragraph:

Referring to FIG. 8, a finger proof, keyed power connector 10(2) with interface passages 18(3) and 18(4) and mating interfaces 19(3) and 19(4) in accordance with other embodiments of the present invention is illustrated. Finger proof, keyed power connector 10(2) is identical to the finger proof, keyed power connector 10(1), except as described below with respect to the interface passages 18(3) and 18(4) and mating interfaces 19(3) and 19(4).

Please replace paragraph 32 on page 6 with the following amended paragraph:

Each of the interface passages 18(3) and 18(4) has a generally square configuration, although the interface passages could have other shapes and configurations for the outer perimeter. The interface passage 18(3) and the mating interfaces 19(3) has sections 38(1)-38(4) and the interface passage 18(4) and the mating interfaces 19(4) has sections 40(1)-40(4), although the interface passages passage 18(3) and mating interface 19(3), and interface passage 18(4) and mating interface 19(4) each could have other numbers and types of sections with other numbers and types of portions in other configurations.

Please replace paragraph 33 on page 6 with the following amended paragraph:

With respect to interface passage 18(3) and mating interface 19(3), the section 38(1) has an indented portion 42(1) adjacent a substantially straight portion 42(2). The section 38(2) has an indented portion 42(3) between the substantially straight portion 42(2) and a protruded portion 42(4) and also has a substantially straight portion 42(5) between the protruded portion 42(4) and an indented portion 42(6). The section 38(3) has a substantially straight portion 42(7) between the indented portion 42(6) and an indented portion 42(8). The section 38(4) has substantially straight portion 42(9) between the indented portion 42(8) and a protruded portion 42(10).

Please replace paragraph 34 on pages 6 and 7 with the following amended paragraph:

With respect to interface passage 18(4) and mating interface 19(4), the section 40(1) has a substantially straight portion 44(1) adjacent an indented portion 44(2). The section 40(2) has a protruded portion 44(3) between the indented portion 44(2) and a substantially straight portion 44(4). The section 40(3) has an indented portion 44(5) between the substantially straight portion 44(4) and the substantially straight portion 44(6). The section 40(4) has an indented portion 44(7) between the substantially straight portion 44(6) and a substantially straight portion 44(8)

Please replace paragraph 35 on page 7 with the following amended paragraph:

Referring to FIG. 9, a finger proof, keyed power connector 10(3) with interface passages 18(5) and 18(6) and mating interfaces 19(5) and 19(6) in accordance with other embodiments of the present invention is illustrated. Finger proof, keyed power connector 10(3) is identical to the finger proof, keyed power connector 10(1), except as described below with respect to the interface passages 18(5) and 18(6) and mating interfaces 19(5) and 19(6).

Please replace paragraph 36 on page 7 with the following amended paragraph:

Each of the interface passages 18(5) and 18(6) has a generally square configuration, although the interface passages could have other shapes and configurations for the outer perimeter. The interface passage 18(5) and mating interface 19(5) has sections 46(1)-46(4) and the interface passage 18(6) and mating interface 19(6) has sections 49(1)-49(4), although the interface passages passage 18(5) and mating interface 19(5), and interface passage 18(6) and mating interface 19(6) each could have other numbers and types of sections with other numbers and types of portions in other configurations.

Please replace paragraph 37 on page 7 with the following amended paragraph:

With respect to interface passage 18(5) and mating interface 19(5), the section 46(1) has an indented portion 48(1) adjacent a substantially straight portion 48(2). The section 46(2) has a substantially straight portion 48(3) between substantially straight portion 48(2) and indented portion 48(4). The section 46(3) has a substantially straight portion 48(5) between the indented portion 48(4) and the indented portion 48(6). The section 46(4) has a substantially straight portion 48(7) between the indented portion 46(6) and a protruded portion 46(8).

Please replace paragraph 38 on page 8 with the following amended paragraph:

With respect to interface passage 18(6) and mating interface 19(6), the section 49(1) has a substantially straight portion 50(1) adjacent an indented portion 50(2). The section 49(2) has a protruding portion 50(3) between the indented portion 50(2) and a substantially straight portion 50(4). The section 49(3) has an indented portion 50(5) between the substantially straight portion 50(6) and the substantially straight portion 50(7). The section 49(4) has an indented portion 50(7) between the substantially straight portion 50(6) and the substantially straight portion 50(8). The section 49(4) also has a protruding portion 50(9) between the substantially straight portion 50(8) and an indented portion 50(10).

Please replace paragraph 39 on page 8 with the following amended paragraph:

Referring to FIG. 10, a finger proof, keyed power connector 10(4) with interface passages 18(7) and 18(8) and mating interfaces 19(7) and 19(8) in accordance with other embodiments of the present invention is illustrated. Finger proof, keyed power connector 10(4) is identical to the finger proof, keyed power connector 10(1), except as described below with respect to the interface passages 18(7) and 18(8) and mating interfaces 19(3) and 19(4).

Please replace paragraph 40 on page 8 with the following amended paragraph:

Each of the interface passages 18(7) and 18(8) has a generally square configuration, although the interface passages could have other shapes and configurations for the outer perimeter. The interface passage 18(7) and mating interface 19(7) has sections 52(1)-52(4) and the interface passage 18(7) 18(8) and mating interface 19(7) has sections 58(1)-58(4) 54(1)-54(4), although the interface passages passage 18(7) and mating interface 19(7), and interface passage 18(8) and mating interface 19(8) each could have other numbers and types of sections with other numbers and types of portions in other configurations.

Please replace paragraph 41 on page 8 with the following amended paragraph:

With respect to interface passage 18(7) and mating interface 19(7), the section 52(1) has an indented portion 56(1) adjacent a substantially straight portion 56(2). The section 52(2) has substantially straight portions 56(3) and 56(4) which are separated by an intermediary passage 53 which connects interface passages 18(7) and 18(8). The section 52(3) has a substantially straight portion 56(5) between the substantially straight portion 56(4) and an indented portion 56(6). The section 52(4) has substantially straight portion 56(7) between the indented portion 56(6) and a protruded portion 56(8).

Please replace paragraph 42 on page 8 with the following amended paragraph:

With respect to interface passage 18(8) and mating interface 19(8), the interface passage 18(8) is a mirror image of the interface passage 18(7). More specifically, section 54(1) with portions 58(1)-58(2) is a mirror image of section 52(1) with portions 56(1)-56(2). The section 54(2) with portions 58(3)-58(4) is a mirror image of section 52(4) with portions 56(7)-56(8). The section 54(3) with portions 58(5)-58(6) is a mirror image of section 52(3) with portions 56(5) and 56(6). The section 54(4) with portions 58(7)-58(8) is a mirror image of section 52(2) with portions 56(3)-56(4).

Please replace paragraph 43 on pages 8 and 9 with the following amended paragraph:

Referring to FIG. 11 a finger proof, keyed power connector 10(5) with interface passages 18(9) and 18(10) and mating interfaces 19(9) and 19(10) in accordance with other embodiments of the present invention is illustrated. Finger proof, keyed power connector 10(5) is identical to the finger proof, keyed power connector 10(1), except as described below with respect to the interface passages 18(9) and 18(10) and mating interfaces 19(9) and 19(10).

Please replace paragraph 44 on page 9 with the following amended paragraph:

Each of the interface passages 18(9) and 18(10) has a generally square configuration, although the interface passages could have other shapes and configurations for the outer perimeter. The interface passage 18(9) and mating interface 19(9) has sections 60(1)-60(4) and the interface passage 18(10) and mating interface 19(10) has sections 62(1)-62(4), although the interface passages passage 18(9) and mating interface 19(9), and interface passage 18(10) and mating interface 19(10) each could have other numbers and types of sections with other numbers and types of portions in other configurations.

Please replace paragraph 45 on page 9 with the following amended paragraph:

With respect to interface passage 18(9) and mating interface 19(9), the section 60(1) has a substantially straight portion 64(2) between indented portions 64(1) and 64(3). The section 60(2) has a protruded portion 64(4) between indented portion 64(3) and substantially straight portion 64(5). The section 60(3) a substantially straight portion 64(7) between indented portions 64(6) and 64(8) and the indented portion 64(6) is also adjacent substantially straight portion 64(5). The section 60(4) has a substantially straight portion 64(9) between the indented portion 64(8) and the protruded portion 64(10).

Please replace paragraph 46 on page 9 with the following amended paragraph:

The interface passage 18(10) with mating interface 19(10) is identical to interface passage 18(9) with mating interface 19(9). More specifically, section 62(1) is the same as section 60(1), section 62(2) is the same as section 60(2), section 62(3) is the same as section 60(3), and section 62(4) is the same as section 60(4).

Please replace paragraph 47 on page 9 with the following amended paragraph:

Referring to FIG. 12, a finger proof, keyed power connector 10(6) with interface passages 18(11) and 18(12) and mating interfaces 19(11) and 19(12) in accordance with other embodiments of the present invention is illustrated. Finger proof, keyed power connector 10(6) is identical to the finger proof, keyed power connector 10(1), except as described below with respect to the interface passages 18(11) and 18(12) and mating interfaces 19(11) and 19(12).

Please replace paragraph 48 on pages 9 and 10 with the following amended paragraph:

Each of the interface passages 18(11) and 18(12) has a generally square configuration, although the interface passages could have other shapes and configurations for the outer perimeter. The interface passage 18(11) and mating interface 19(11) has sections 66(1)-66(4) and the interface passage 18(12) and mating interface 19(12) has sections 68(1)-68(4), although the interface passages passage 18(11) and mating interface 19(11), and interface passage 18(12) and mating interface 19(12) each could have other numbers and types of sections with other numbers and types of portions in other configurations.

Please replace paragraph 49 on page 10 with the following amended paragraph:

The interface passage 18(11) with mating interface 19(11) is identical to interface passage 18(9) with mating interface 19(9) described earlier with reference to FIG. 9. More specifically, section 66(1) is the same as section 60(1), section 66(2) is the same as section 60(2), section 66(3) is the same as section 60(3), and section 66(4) is the same as section 60(4).

Please replace paragraph 50 on page 10 with the following amended paragraph:

With respect to interface passage 18(12) and mating interface 19(12), the section 68(1) has an indented section 70(1) adjacent another less indented portion 70(2). The section 68(1) also has a substantially straight portion 70(3) which is between the indented portion 70(2) and an indented portion 70(4). The section 68(2) has a protruded portion 70(5) between the indented portion 70(4) and substantially straight portion 70(6). The section 68(3) a substantially straight portion 70(8) between indented portions 70(7) and 70(9). The section 68(3) also has another indented portion 70(10) adjacent the indented portion 70(9).

The section 68(4) has a substantially straight portion 70(11) between the indented portion 70(10) and a protruded portion 70(12).

Please replace paragraph 51 on page 10 with the following amended paragraph:

Referring to FIG. 13, a finger proof, keyed power connector 10(7) with interface passages 18(13) and 18(14) and mating interfaces 19(13) and 19(14) in accordance with other embodiments of the present invention is illustrated. Finger proof, keyed power connector 10(7) is identical to the finger proof, keyed power connector 10(1), except as described below with respect to the interface passages 18(13) and 18(14) and mating interfaces 19(13) and 19(14).

Please replace paragraph 52 on page 10 with the following amended paragraph:

Each of the interface passages 18(13) and 18(14) has a generally square configuration, although the interface passages could have other shapes and configurations for the outer perimeter. The interface passage 18(13) and mating interface 19(13) has sections 72(1)-72(4) and the interface passage 18(14) and mating interface 19(14) has sections 74(1)-74(4), although the interface passages passage 18(13) and mating interface 19(13), and interface passage 18(14) and mating interface 19(14) each could have other numbers and types of sections with other numbers and types of portions in other configurations.

Please replace paragraph 53 on pages 10 and 11 with the following amended paragraph:

The interface passage 18(13) is a mirror image of the interface passage 18(12) with the same number and types of sections and portions as described earlier with reference to FIG. 12. More specifically, section 72(1) is a mirror image of section 68(1), section 72(2) is a mirror image of section 68(4), section 72(3) is a mirror image of section 68(3), and section 72(4) is a mirror image of section 68(2).

Please replace paragraph 54 on page 11 with the following amended paragraph:

The interface passage 18(14) and mating interface 19(14) is identical to interface passage 18(9) and mating interface 19(9). More specifically, section 74(1) is the same as

section 60(1), section 74(2) is the same as section 60(2), section 74(3) is the same as section 60(3), and section 74(4) is the same as section 60(4).

Please replace paragraph 55 on page 11 with the following amended paragraph:

Referring to FIG. 14, a finger proof, keyed power connector 10(8) with interface passages 18(15) and 18(16) and mating interfaces 19(15) and 19(16) in accordance with other embodiments of the present invention is illustrated. Finger proof, keyed power connector 10(8) is identical to the finger proof, keyed power connector 10(1), except as described below with respect to the interface passages 18(15) and 18(16) and mating interfaces 19(15) and 19(16).

Please replace paragraph 56 on page 11 with the following amended paragraph:

Each of the interface passages 18(15) and 18(16) has a generally square configuration, although the interface passages could have other shapes and configurations for the outer perimeter. The interface passage 18(15) and mating interface 19(15) has sections 76(1)-76(4) and the interface passage 18(16) and mating interface 19(16) has sections 78(1)-78(4), although the interface passage 18(15) and mating interface 19(15), and interface passage 18(16) and mating interface 19(16) each could have other numbers and types of sections with other numbers and types of portions in other configurations.

Please replace paragraph 57 on page 11 with the following amended paragraph:

The interface passage 18(15) and mating interface 19(15) is identical to the interface passage 18(9) and mating interface 19(9) described earlier with reference to FIG. 11 with sections 76(1), 76(3), and 76(4) corresponding to sections 60(1), 60(3), and 60(4), except that section 76(2) is different from section 60(2). The section 76(2) has a substantially straight portion 80(1) that is separated by an intermediary passage 77 which connects interface passages 18(15) and 18(16).

Please replace paragraph 58 on page 11 with the following amended paragraph:

The interface passage 18(16) and mating interface 19(6) also is identical to the interface passage 18(9) and mating interface 19(9) described earlier with reference to FIG. 11 with sections 78(1)-78(3) corresponding to sections 60(1)-60(3), except that section 78(4) is different from section 60(4). The section 78(4) has a substantially straight portion 82(1) that is separated by the intermediary passage 77 which connects interface passages 18(15) and 18(16).

Please replace paragraph 59 on page 12 with the following amended paragraph:

As the above described exemplary embodiments have illustrated, a variety of different combinations of shapes for the outer perimeter or periphery of the interface passages 18(1) - 18(16) and mating interfaces 19(1)-19(16). With these keyed configurations for the outer perimeter of the interface passages, a system can be built which will assure the proper connection of a particular power source to a particular component.